

MONTANA AERONAUTICS COMMISSION



Volume 17 No. 9

September, 1966

RECORD CROWD ATTENDS BROADUS DEDICATION

An estimated 2,000 persons attended the Dedication of the new Broadus airport on August 14th. Over 50 aircraft came from major cities in Montana, Wyoming, Colorado, North and South Dakota. Governor Babcock and MAC Director Charles Lynch were the featured speakers for the official ceremonies; Mr. Osborne Pemberton, Chairman of the Commercial Club's airport committee, was master of ceremonies.

Governor Babcock in his address highly applauded the community on the \$20,000 airport. He made particular note of the contrast between several years ago when he landed on the old strip and when he landed his twin-engined aircraft on Dedication Day.

Mr. Lynch stated that it was the largest turnout he had seen this year for a community airport dedication and praised the large crowd for attending. In addition to the pilots and their passengers, the 3,200 foot gravelled strip was lined with automobiles.

Both the Governor and Mr. Lynch stressed the importance of the new airport and that it was the accomplishment of a 40 year old dream, effort and need. In addition to regular air traffic the facility will be a tre-

mendous boon to the hunters wishing to enter the area this fall.

Following the dedication ceremonies, Lyman Choate of Miles City gave an excellent display of stunt flying and Gary Worrall of Miles City thrilled the onlookers with his sky diving demonstration, both events were narrated by Stanley Damm, County Airport Committee Chairman.

We extend congratulations to the Airport Commission and the Powder River Commercial Club, their Chairman and Committeemen for a highly successful dedication and good entertainment—a befitting tribute to the new facility.

AVIATION DAY AT HAVRE

The Havre Hangar of the Montana Pilots Association will hold an Aviation Day on September 11. Commencing at 12:00 Noon, a full program will be enjoyed by all.

FIRST SHOWING — FRONTIER
AIR LINES NEW 580 CONVAIR.

SKY DIVERS—HAVRE'S OWN.

COPTER DISPLAY — MONTANA
NATIONAL GUARD.

AIRCRAFT DISPLAY.

AIRPLANE RIDES—1½¢ PER
POUND.

LUNCH WILL BE SERVED.

Come to the Show—Havre—Sep-
tember 11.

BEECHCRAFT FUN FAIR AND AIRCRAFT CLINIC

On September 24 and 25, Combs-Pickens' modern facilities on Logan Field, Billings, will be the scene of a Beechcraft "Fun Fair". The Fun Fairs, scheduled in 50 cities, have been held in more than a dozen cities to-date and have had an estimated average attendance of 500 persons.

The two day program feature the three Beechcraft Musketeer Models and provide activities for all members of the family including aircraft rides, a ladies corner and many more.

Fun Fair team members are: L. R. "Bob" Jessen, Robert Buettgenbach, W. R. "Bill" Beech, John J. Funsch, Robert E. Mallonee, F. O. "Frosty" Robertson, Walter Zimmerman, Kenneth E. Briggs, H. Jerry Warner, Rex Lorence, Austin Rising, Will West and H. A. "Jim" Osment.

If you are the family whose interests center around private aviation—**Don't Miss the Family Aviation Day—Attend the Fun Fair!!**

Later the same week, on September 26 and 27, a Beechcraft Owners Clinic will be held at Combs-Pickens.

All Beechcraft owners are urged to take advantage of a free aircraft inspection by Factory personnel!

Official Monthly Publication
of the
**MONTANA AERONAUTICS
COMMISSION**

Box 1698
Helena, Montana

Tim Babcock, Governor

Charles A. Lynch, Director

Carl W. (Bill) Bell, Chairman
Jack R. Hughes, Vice Chairman
Peter H. Black, Secretary
Clarence Anthony, Member
E. B. Cogswell, Member
Gordon Hickman, Member
Walter Hope, Member



ATTENTION AIRCRAFT OWNERS

SUBJECT: Exchange of all present Airworthiness Certificates for the new revised certificate.

FROM: Supervising Inspector.

TO: All airport managers, fixed base operators and aircraft owners.

The airworthiness certificates for STANDARD classification (normal, utility, acrobatic and transport categories) have been revised to be consistent with the new regulations. The new form can be identified by the words "FAA Form 1362 (7-65)" in the lower left corner.

The present STANDARD airworthiness certificates installed in aircraft are obsolete, therefore all aircraft owners are urged to exchange them at the local GADO office.

The new certificate may be obtained simply by mailing the old certificate, or bringing it, to our office, or by presenting it to a maintenance inspector in the field.

In all cases the certificates will be replaced and returned to the owner without delay.

It is suggested that any time the aircraft is not going to be operated for a few days, such as when it is undergoing an inspection, repair or alteration, that the certificate be removed, and forwarded to our office for replacement.

WANTED TO BUY: Piper PA 20—with 135 HP or modified to 150 HP. Contact: David Hines, Route 1, Box 752, Grass Valley, California.

CHILDS AND CO-PILOT WIN BIG SKY RACE



Smiling First Place Winners and Co-Chairman: Lt. to Rt. Bev Ledbetter, Helen Dunlop, Elsie Childs, and Pearl Magill.

Elsie Childs and co-pilot Helen Dunlop, both of Helena, took First place in the Ladies 99's 3rd Annual Big Sky Race. Pat Roemer and co-pilot Olive Sickels of Missoula, took Second; Rhoda Johnson and co-pilot Julia Cebulski, Manhattan, were Third; Karin Ribb of Hamilton with co-pilot Jerry Arthun of Livingston, Fourth.

17 aircraft participated in the 400 mile race which began in Glasgow with stops at Jordan, Malta and Roundup and finishing in Lewistown. Co-Chairmen Bev Ledbetter of Havre and Pearl Magill of Glasgow designed the course which was kept a secret until immediately prior to the race. Various tests and written exams were given at each route stop and the gals were graded at each location.

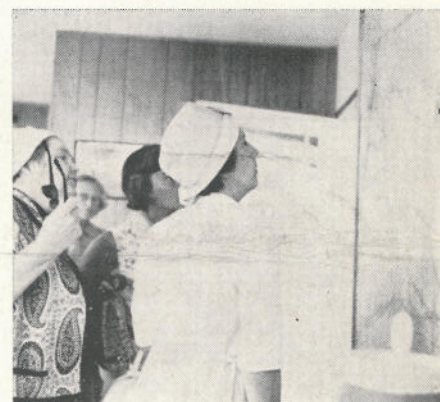
Mary Stevenson, Missoula (co-pilot Grace Ness of Rudyard) held the high over-all score at Malta and also first for the written exam given at Malta.

High score for aircraft pre-flight at Jordan was a tie between Rhoda Johnson (co-pilot Julia Cebulski) and Betty Nunn (co-pilot Dottie Payne) both of Great Falls.

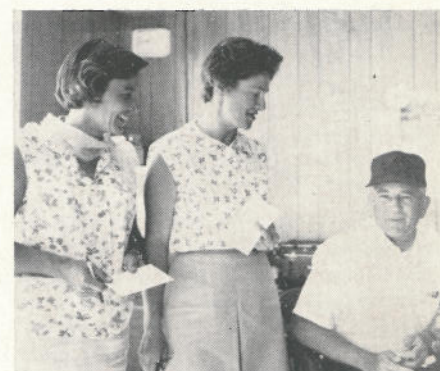
First place winner Childs (co-pilot Helen Dunlop) had high score for written test at Roundup.

High score for ETA at Roundup was won by Mary Jordan (co-pilot Mary Fleming).

Out-of-state contestants, Margaret Weaver and co-pilot Betty Adams of Worland, Wyoming, won the spot landing contest at Lewistown.



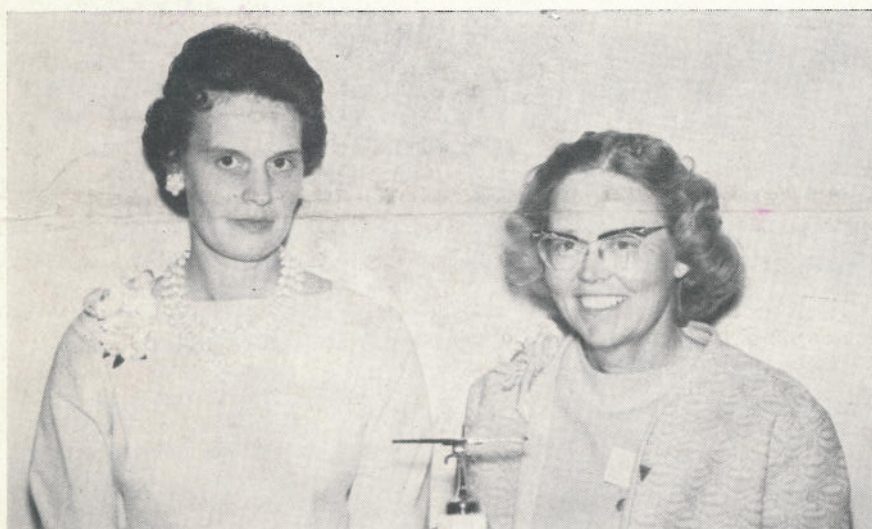
To WHERE? Lt. to Rt. Laulette Hanson, Mary Jordan and Winifred "Pud" Lovelace.



MAC's Safety and Education Officer Jack Wilson, race official at Roundup, smiles knowingly as Pilot Jordan and co-pilot Fleming wonder "what's next?"



Second Place Winners, Co-pilot Olive Sickels and Pilot Pat Roemer. Seen in the background is Aeronautics Commissioner Jack Hughes and co-chairman Bev Ledbetter.



Third Place Winners, Co-Pilot Julie Cebulski and Pilot Rhoda Johnson.

Other contestants were: Kay Widmer, co-pilot Pud Lovelace, both of Bozeman; Laulette Hansen of Havre, co-pilot Pat Johnson, Helena; Carol Frazer, co-pilot Erma Stanley of Lewistown; Joan Orley, co-pilot Flo Marperus of Lewistown; Madonna Smith, co-pilot Betty Tindall of Lewistown; Ann Hafer and co-pilot Dorothy Craig of Billings; Pat Ecton, co-pilot Jeanne Mattson of Manhattan; Peggy Kruger, co-pilot Pat Spillman, of Cut Bank and Margaret Tuxill, flying solo, of Rexford.

The Awards Banquet was held in the Yogo Inn, Leon Jacobs master of ceremonies. Lewistown Mayor

Mondale gave a short welcome address and introductions were made of race participants, individuals and groups responsible for the success of the race and banquet.

Vice-Chairman of the Montana Aeronautics Commission, Jack R. Hughes of Missoula, presented the awards donated by the Commission. Trophies were awarded to the first three place winners and plaques to the winner of the major contests. A number of lovely gifts and certificates were presented from MPA Hangars, clubs, private businesses and individuals for various race accomplishments.

FAA INSPECTOR'S CORNER



The 1966 FAA Aviation Mechanic Safety Award Program is well underway. Entries for this year's awards will be accepted through December 31.

The two national winners, one each in the air carrier and general aviation fields and their families are flown to Washington, D.C. where the mechanics are honored at official FAA ceremonies. They will receive a specially struck medallion and a cash award of five hundred dollars. I repeat, **THIS YEAR THE NATIONAL GENERAL AVIATION WINNER WILL RECEIVE FIVE HUNDRED DOLLARS.** All national and regional winners are also automatically appointed to memberships in the Champion Spark Plug Company Aviation Mechanic Club. This is an exclusive group of mechanics whose contributions to air safety have earned them a national or regional FAA Aviation Mechanic Safety Award.

Last year's Montana winner, George Houdek in Shelby, modified a light aircraft seat back reclining mechanism to prevent accidental actuation by the seat belt. His contribution was submitted by Shelby Flying Service, the fixed base operator.

The National general aviation winner developed and improved winterizing methods for the Bell 47C helicopters.

The mechanics in Montana are making modifications, and developing procedures very day which improve air safety. Here is a chance for the fixed base operator or the pilot who has knowledge of an improvement by the mechanic to show his appreciation for a job well done. Now is the time to submit the nomination form to the General Aviation District Office. If you don't have a form we will be glad to send you one or jot it down on a sheet and mail it to the GADO, and we will follow through.

Let's bring the regional and national FAA Aviation Mechanics Award for general aviation to Montana.

FOR SALE: 1954 Tri-Pacer—300 hrs. SMOH—New Annual—Primary Panel—Superhomer—Price \$3,000. Firm—Contact V. E. Castle—P. O. Box 164, Billings, Montana. Phone 245-7214 Weekends.



FILM LIBRARY REPORT FISCAL YEAR 1966

The popularity of the Montana Aeronautics Commissions Film Library can be shown by the increased number of requests and showings over the previous years. The 29 films and seven (7) records and/or film strips were sent out for a total of 804 times. This, incidentally, is a 39 per cent increase over fiscal '65, a 77 per cent increase over fiscal '64, and a 248 per cent increase in showings over fiscal year 1963. The total viewing audience has been compiled as 64,320 pilots, students, teachers and members of various civic organizations. The film "Montana and the Sky" is again the most popular film in our library. It was mailed out 62 times in the state and 75 times to 29 other states. The out-of-state viewing audience amounts to nearly 6,000 persons.

The Commission has added two new films during this fiscal year. "The Four Days of Gemini 4" and "Come Fly With Me, Darlene," and six NASA films have been obtained for distribution in Montana.

The films listed below are available for use on a free loan basis. A brochure describing each film is available upon request.

A Fire Called Jeremiah
Agricultural Aviation
Airport America
Air Taxi, USA
Approach to Land, G.C.A.
Approach to Land, I.L.S.
Aviation and the States
Come Fly With Me, Darlene
Eyes in Outer Space
Flight Decision
Flying Businessman
Flying Farmer
Flying VOR
Man in Flight
Man in Space
Montana and the Sky
Roads in the Sky
Road to the Stars
Take the High Road
The Best Investment We Ever Made
To Save a Life
We Saw it Happen

NASA FILMS

The Four Days of Gemini 4
America in Space
Celestial Mechanics and the Lunar Probe

Lunar Bridgehead
The Mastery of Space
Project Apollo—Manned Flight to the Moon

MOBILE WASHER PURCHASED BY COMMISSION

A time and labor saving Electro Magic high pressure washer has been purchased for the cleaning of aircraft and other Aeronautics Commission vehicles. It is estimated that the time consuming task of aircraft washing now requires only one-fourth of the time taken previously.

The Commission's automobiles and trucks can now be washed on an average of ten minutes each.



MAC's Jerry Burrows demonstrates the ease of aircraft cleaning with the new Electro Magic Washer.

Being mobile—the washer can be pulled to any particular job and the hose electrical outlet is easily connected. The reservoir tank containing the cleaning solution has a large capacity and adequate for cleaning approximately four aircraft similar to the single engine shown.

The washer is a 115 Volt-60 Cycle-Electrical Source Manufactured by the Kota Division—Dura Corporation—Vermillion, South Dakota.

COMMISSION GIVES GO AHEAD FOR HAVRE OMNI

The Montana Aeronautics Commission at their regular meeting held in East Glacier on August 17th, approved the Department to proceed with plans and specifications for the installation of the State-owned Omni range at Havre, Montana. This will be accomplished as soon as studies can be completed on equipment and installations.



CALENDAR

September 1, 2 & 3, Vancouver, B.C.—International Northwest Aviation Council Annual Convention.

September 6, Helena—Bid Opening on Hysham Airport.

September 7, 8 & 9, Wheeling, West Virginia, Oglebay State Park—National Association of State Aviation Officials Annual Convention.

September 11, Havre—Aviation Day, sponsored by the MPA local hangar. Sky divers, rides, new and old aircraft displays and antique cars. 12:00 Noon. Lunch will be served.

September 14, Helena—Montana Aeronautics Commission monthly meeting.

September 17 & 18, West Yellowstone—Western Airlines last scheduled flights. Airline service discontinued for winter months.

September 27, 28 & 29, St. Louis, Mo.—National Business Aircraft Association Annual Convention. Chase Park-Plaza Hotel.

September 28, Washington, D.C.—Pacific Northwest/Southwest Service Case—Oral Arguments.

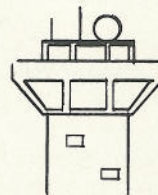
September 30, October 1 & 2, Shelby—Montana Flying Farmers and Ranchers Convention.

October 1-6, Palm Springs, California—Aircraft Owners and Pilots Association Plantation Party.

October 9-11, Norman, Oklahoma—National Airports Conference of American Association of Airport Executives and the University of Oklahoma.

October 11, Bozeman—Western Montana Service Case Hearing.

October 13, Missoula—Western Montana Service Case Hearing.



TOWER

OPERATIONS

JULY, 1966

	Total Operations	Instrument Operations
Billings	14,359	459
Great Falls	12,777	335
Missoula	6,981	77
Helena	4,988	51

Letters to the Director

Dear Mr. Lynch:

Subject: Ross International Airport, Sweetgrass, Montana.

Recently your employees graded and installed black and white cone-shaped runway markers at Ross International Airport, Sweetgrass, Montana.

You and your employees are to be commended on the excellent work done on this project. It has brought a great number of compliments from pilots who use this airport frequently in their flights to and from Canada.

In the past, due to poor markings and high grass and weeds on the strip, we were often requested to direct a pilot by radio as to how to locate it. Since the installation of the new markers we have not had any such request, as the pilots state it is easily distinguished from the air.

The Immigrant Inspectors of this port are repsonsible for the inspection of airplane arriving from Canada. It's a pleasure to hear compliments rather than complaints and we wish to thank you for this improvement project.

Signed: Charles T. Stone,
Supervisory Immigrant Insp.
Sweetgrass, Montana

Montana Aeronautics Commission
Gentlemen:

Flying Cessna Skymaster N2196-X, I had to make a forced landing at your Rock Creek Airstrip. It is very handy and located just right. It saved our necks. Keep up the good work for Montana Aviation. Thanks.

Signed: Bill Feller
St. Paul, Minnesota

FALL FLY-IN ATTENTION: ALL MPA MEMBERS

Attend the Fall Fly-In September 17 and 18, at the Viking Lodge, Whitefish. Fly in to the Flathead County Airport, Kalispell — transportation will be provided from the airport to the lodge.

BOATING—WATER SKIING AND SWIMMING—PRIME RIB DINNER.

LET'S MAKE THIS FLY-IN THE BIGGEST EVER!!

FIFTY FIVE AIRCRAFT ATTEND LINCOLN DEDICATION

Approximately 55 aircraft landed at the new 4,000 ft. Lincoln Airport on Dedication Day, July 24th. By 11:00 A.M., 42 aircraft had landed including six Montana National Guard planes. Over 200 persons were fed a delicious breakfast of hot cakes, sausage, eggs and plenty of hot coffee, sponsored and prepared by the Lincoln Lions Club. A number of aircraft and numerous autos arrived following breakfast in time for the official ceremonies. The Great Falls MPA Hangar held a hospitality trailer and served free ice-cold refreshments to adults and children throughout the morning.

Prior to the ceremonies, the Montana Ladies 99's held their regular monthly meeting in a cool corner of the new hangar, with 12 members and three guests, flying in from Missoula, Belt, Hamilton, Bozeman, Glasgow and Helena.

Assistant Director of the Aeronautics Commission, James Monger, was master of ceremonies for the official dedication. Jim commenced by introducing the speakers platform; David Rask, FAA District Engineers' Office in Helena; MAC Director, Charles A. Lynch; Robert Morgan, United States Forest Service; Mr. Len Lambkin, Lincoln Lions Club; MAC Commissioner, Clarence Anthony; Mr. Carl "Bill" Bell, Chairman of the Commission and Mr. Bill Wenzel of Wenzel Co., Great Falls, Consulting Engineers for the Airport Project.



Lincoln resident, Len Lambkin and Bob Morgan, U.S. Forest representative.

Mr. Lambkin gave the welcome address and expressed the delight of the community in having the new facility, followed by a few remarks by the Forest Service representative, Mr. Bob Morgan. David Rask ex-

tended the FAA's congratulations to the Aeronautics Commission, the Forest Service, the individuals and the community of Lincoln for their combined efforts that made the excellent new strip possible.

Jim at this time introduced two Lincoln residents that have labored especially diligently towards the accomplishment of the airport, Charles Grantier, airport manager and Pat Mulcare.

MAC Director Lynch added his congratulations and appreciation for the large crowd in attendance. Mr. Lynch introduced Mr. Bill Bell, MAC Chairman and featured speaker for the day.



Commission Chairman, Bill Bell enumerates advantages an airport has to a community.

Mr. Bell extended "Thanks" to the Great Falls and the Missoula hangars of the Montana Pilots Association and to the Lincoln Lion's Club for the days festivities.

Mr. Bell remarked on the satisfaction of all concerned and stated that the planning and efforts toward the airport began in 1957.

Mr. Bell continued to list the assets of an airport to a community and the aid it will be to Lincoln industry. A good airport is sound economy and is an attraction to possible new industries.

Speaking of the Commission airport program, Mr. Bell stated that 58% of the Commission budget is airport construction.

Bill gave a brief account of the Commission's expanding Aviation Education program and urged the attending parents to encourage the schools in all communities to include this in their curriculum. As an excellent example, he explained that the Glasgow High School has a ground school that carries full high school



MAC Director, Lynch, Pat Mulcare, Charles Grantier, Lincoln Airport Manager.

credit. He noted the importance of Aviation Education in this day of aeronautics and space.

The dedication over, many remained to enjoy picnics and fishing for the balance of the day in one of Montana's finest scenic spots.

MONTANA FF & R CONVENTION DETAILS

The Montana Flying Farmers and Ranchers Association have planned an interesting and fun type convention for September 30, October 1 and 2 in Shelby. With the cooperation of the Shelby Chamber of Commerce a full schedule has been planned.

Montana Aeronautics Commission Chairman, Carl "Bill" Bell of Glasgow will be the featured speaker.

Prizes will include \$50 in silver dollars.

Coffee and donuts will be served at the airport and transportation will be provided from the airport to the convention headquarters—the O'Haire Manor.

All Flying Farmers and Ranchers are urged to attend. **REMEMBER**, special activities and facilities have been arranged for the "Teens."

For reservations—Write to O'Haire Manor, P. O. Box 630, Shelby, Montana.

FOR SALE: 1958 Piper Tri-Pacer 160. N849OD Blue and White—Fabric Excellent—TT 1,000—SMOH 290. Can be seen at Anaconda's new airport. Priced at \$4,750 or will take in plane of \$1,500 to \$2,000 range. Write to Robert Noll, 507 Locust, Anaconda, Montana.

FOR SALE: 1960 Mooney MK20A—Excellent condition. Total time 1,350 hrs.—150 hrs. on chrome major—MK12 Radio—full panel, R. Beacon—Aux. Tank. Price: \$8,000. Contact Walt Sterhan, 1220 South Bozeman, Bozeman, Montana. Phone: 587-7679 evenings.

FEDERAL AVIATION AGENCY INSTRUMENT PILOT EXAM-O-GRAM NO. 10 ALTIMETRY

In spite of the importance of the pressure altimeter, almost fifty percent of the applicants taking Instrument Pilot Written Examinations demonstrate a knowledge deficiency concerning the effect of atmospheric temperature and pressure changes on this instrument. The effects of other altimeter errors (mechanical, elastic, installation) are usually negligible for normal operations and will not be considered here.

ATMOSPHERIC TEMPERATURE AND PRESSURE ERRORS:

The effects of atmospheric temperature and pressure changes on the altimeter are summarized by the adage, "Cold or low, look out below." When flying from warm air to cold air, and/or from high pressure to low pressure, your aircraft is lower than the indicated altitude, unless the altimeter is adjusted to compensate for the change.

An altimeter is accurate at all altitudes only when the conditions of a Standard Atmosphere exist. In general a standard atmosphere occurs when the

1. sea level barometric pressure is 29.92 Hg.,
2. sea level free air temperature is +15°C, and
3. temperature decreases 2°C with each 1,000 foot increase in altitude.

Since the above conditions rarely

exist, the altimeter requires correction.

The altimeter is a pressure measuring device and when set at 29.92 will indicate 4,000 feet at a level where the atmospheric pressure is 25.84 Hg. The true altitude at which this pressure actually exists may be more or less than 4,000 feet. On a warm day the expanded air is lighter in weight per unit volume than on a standard day or a cold day. Therefore, the pressure level where the altimeter will indicate 4,000 feet is **higher** than it would be under standard conditions. On a cold day the reverse would be true and the 4,000 foot pressure level would be **lower**.

Changes in surface pressure may also affect the pressure levels at altitude. An aircraft flying into an area of lower pressure will be **lower** than indicated altitude unless the altimeter is adjusted to the local altimeter setting.

ALTIMETER SETTING: The local altimeter setting "corrects" for the difference between existing pressure and standard atmospheric pressure. Whether local pressure is higher or lower than standard, when the aircraft altimeter is set to the local altimeter setting (assuming no setting scale error) it will indicate true altitude (MSL) at **ground level**. The indicated altitudes **above** ground level are normally **not** true altitudes because of nonstandard lapse rates. The point to remember is that when all aircraft operating below 18,000 feet are using the current local altimeter setting, they have a common reference for indicated altitude. (See **ALTIMETRY**—Airman's Information Manual for additional details.)

SUMMARY

1. For normal operations (except to determine true airspeed, true altitude, engine operations, etc.) pilots should disregard the effect of nonstandard temperatures. However, low temperatures may need to be considered when selecting altitude for terrain clearance purposes.
2. If the local altimeter setting is lower than the setting on the Kollsman dial, the aircraft will be lower than the indicated altitude. A reverse situation is also true.

In China it's the custom for a man never to take a girl out until he marries her. In this country he never takes her out afterwards.

NEW FAA RULE TO LIMIT TALL TOWER CONSTRUCTION

A new rule aimed at limiting the construction of television antenna towers and other structures of more than 2,000 feet in height was announced by the Federal Aviation Agency.

Under the rule, "any structure proposed in excess of 2,000 feet above the ground will be considered to be, inherently, a hazard to air navigation and an inefficient utilization of the airspace." The party proposing the construction will have the burden of overcoming this technical assumption "by demonstrating to the Agency that such a proposal will not create an inefficient use of airspace or constitute a hazard to air navigation." A determination of no hazard will be issued "only in exceptional cases."

The rule amends Part 77 of the Federal Aviation Regulations, which requires builders to notify FAA of proposed construction that may constitute a hazard to safe air navigation. The Agency then evaluates the proposal and issues a determination of hazard or no hazard, as the case may warrant.

The rule, which became effective on July 12, complements a recent ruling of the Federal Communications Commission "that the public interest requires a specific ceiling to halt the upward trend in antenna tower heights, and that 2,000 feet above ground is both realistic and appropriate."

MONTANA FF & R PRESIDENT APPLAUDED AT NATIONAL CONVENTION

Montana Flying Farmers and Ranchers president, Clay Greening of Laurel received recognition at the National Convention held July 30 through August 6 in Louisville, Kentucky, for Montana's placing third in the International Membership Contest. And in addition for Clay's personal efforts on the Flying Farmers and Ranchers directory.

The Montana chapter has put in a very active year and membership is definitely climbing. Congratulations to their president Clay, supporting officers and the membership.

EXCELLENT SEMINAR PRESENTED BY FAA ACADEMY SPECIALISTS

33 Montana pilots enjoyed an excellent seminar on Multi-Engine Aircraft held by the General Aviation District Office in Helena on August 11. The instruction and lectures were presented by Mr. G. P. Abler and Mr. C. A. Zimmerman of the FAA Academy in Oklahoma City, Oklahoma.



FAA Academy specialists, G. P. Abler and C. A. Zimmerman.

The pilots attending from Havre, Great Falls, Kalispell and Helena, highly commended the method of presentation and the material covered which included Light Twin Engine performance and characteristics as well as aircraft certification requirements, V-Speeds, Takeoff Variables and Techniques.

Prior to the Seminar for all pilots, the Academy specialists held a three day inspectors course. Fritz Lueneburg, GADO 1, Billings and Tom Spencer, GADO 9, Helena attended. The inspectors course covered training in performance and characteristics of the Cessna 411 and the use of the Integrated Flight System, Automatic Pilot, Distance Measuring equipment, radar beacon transponders and other navigational aids.

The purpose of the roving training program is to bring the latest equipment and techniques to the FAA Inspectors who will be using them in the field and checking pilots who have this equipment. During the course the Inspectors received 10 hours of flying time and twelve hours of ground school instruction.

FOR SALE: 1940 Piper J3C-65—248 hrs. SMOH—Complete cover with razor back in 1965—annualled in March, 1966—refinished prop at annual—1,436 hrs. TT.—Contact: Peggy Ralston, Culbertson or Call 787-5258.

CONGRATULATIONS!



CERTIFICATES ISSUED RECENTLY TO MONTANA FLYERS

STUDENTS

Kirley, Kevin S.—Billings
Lukas, Leonard P.—Glasgow
Field, Richard N.—Eureka
Walter, Mitchell J.—Poplar
Tindall, Betty D.—Lewistown
Kingery, Donald L.—Billings
Tidyman, James A.—Billings
Bermes, John M.—Billings
MacFarlane, Peter J.—Havre
Wick, Wayne E.—Sidney
Rudin, Judith A.—Geraldine
Devoe, Norman W.—Billings
Dobbin, Douglas E.—Billings
Worthington, Robert A.—Billings
Pulasky, John C.—Huntley
Brown, Donald R.—Glendive
Taylor, Kenneth M.—Kolin
Moran, Dwain A.—Columbus
Mastel, Charles F.—Beach, N.D.
Thomson, John K.—Harlowton
Henley, Earl E.—Billings
Beardsley, Wayne L.—Glasgow
Heberle, Frederick H.—Forsyth
Hanson, Ronald H.—Billings
Wambach, Miles P.—Billings
Meierding, Randal R.—Billings
Keller, Esther A.—Missoula
Bushman, Jon M.—Laurel
Nicholas, Wesley B.—Laurel
Winfrey, Bruce T.—Melstone
Stephens, Millard L.—Lavina
Blain, Rodney A.—Lewistown
Finch, Robert A.—Winnipeg, Man.
White, Orville L.—Glendive
Hall, Charles D.—Billings
Troxel, George O.—Missoula
Freese, Alice May—Missoula
Baucus, Max Sieben—Helena
Birholz, Willard Paul—Great Falls
Harding, Warren G.—Simms
Lattin, Donald M.—Great Falls
Rowe, Conrad J.—Cascade
Roehl, Leland L.—Great Falls
Bergan, Patrick—White Sul. Spgs.
Harman, Don E.—Turner
Stephens, Dave L.—Dutton
Steffeck, Mary J.—Helena
Korman, Lawrence R.—Hamilton
Mysse, Robert J.—Missoula
Billmayer, Gene C.—Hogeland
Colton, Earl F.—Kalispell
Schock, Marvin G.—Choteau
Waltermire, James D.—Choteau

Bauer, Fred L.—Kalispell
 Cada, Lawrence K.—Columbia Falls
 Egan, Joseph P.—Conrad
 Hagen, Jan—Great Falls
 Overcast, Kenneth D.—Chinook
 MacMillan, Warren D.—Patty Canyon
 Gaustad, Harold J.—Bozeman
 Wike, Richard G.—Bozeman
 Castleman, Harry L.—Great Falls
 Gregoire, Karen J.—Great Falls
 Loser, Jerry J.—Great Falls
 Ukrainetz, Ronald W.—Great Falls
 Weissman, Ted S.—Great Falls
 Wilson, Donald G.—Greenlawn, N.Y.
 Wutzke, Ronald Alvin—Great Falls
 Stark, Richard H.—Conrad
 Martin, Darrell R.—Kalispell
 Hamel, Wayne A.—Ronan
 Hurst, Jeffrey A.—Kalispell
 Webster, Louis W.—Whitefish
 Gomke, Arnold A.—Missoula
 Evankovich, Laurence P.—Butte
 Rost, Carroll J.—Columbia Falls
 Davis, Howard W.—Lincoln
 Ragen, Michael W.—Townsend
 Brunsvold, Homer C.—Helena
 Compton, Howard L.—Kalispell
 Armstrong, William G.—Col. Falls
 Cowan, Steven M.—Shelby
 Meras, Peter K.—Helena
 Lyman, Joan W.—Hamilton
 Hammer, Howard H.—Hamilton
 Veseth, Michael A.—Havre
 Franke, Lloyd—Darby

PRIVATEES

Osen, Tommy C.—Billings
 Johnson, Carl L. Jr.—Glasgow
 Smith, Henry G.—White Sul. Spgs.
 Sterrett, Robert H.—Wh. Sul. Spgs.
 Smith, Madonna A.—Lewistown
 Bovee, Daniel L.—Powell, Wyo.
 Larsen, Larry S.—Billings
 Nettles, Benjam L.—Meeteetse, Wy.
 Bessey, Larry D.—Cody, Wyo.
 Jones, Forrest E.—Billings
 Thompson, C. Paul—Billings
 Weibert, Ruben G.—Garryowen
 Raymond, Robert C.—Miles City
 Schultz, August L.—Lewistown
 Elliott, Kenneth L.—Harlowton
 Petaja, Gordon A.—Winnett
 Cook, Richard J.—Glendive
 Uihlein, Herman A. III—Mil., Wisc.
 DeMartin, Rick—Rudyard
 Chalmers, Ann L.—Choteau
 Mager, Douglas J.—Wilsall
 Morton, Audrey M.—Kalispell
 Mitchell, George L.—Missoula
 Brown, Stephen D.—Missoula
 Stelling, Charles R.—Polson
 Eason, James H.—Missoula
 Henderson, Richard A.—Hall
 Hatten, Daryl O.—Thompson Falls
 Bakke, Keith E.—Helena
 Ward, Vernon R.—Columbia Falls

Sheppard, Ronald L.—Great Falls
 Walker, Robert O.—Helena
 Hoffman, Wayne D.—Helena
 Holding, Arnold G.—Missoula
 Brandoff, Todd A.—L. I., N. Y.
 Palmquist, Robert C.—Rosemount,
 Minn.
 Petersen, Jerald L.—Eagle, Colo.
 Gummer, Thomas E.—Missoula
 Goeser, Peter J. H.—Richardton,
 N.D.

ADVANCED AND SPECIALIZED Commercial

Mills, Gary M.—Billings
 Gnose, Donald D., Jr.—Missoula
 Drentlaw, David A.—Northfield,
 Minn.
 Finch, Robert A.—Winnipeg, Man.
 Steadman, Gene B.—Broadus
 Voorhees, Harry K.—Glasgow
 Burton, John C.—Dillon
 Christensen, Robert P.—Missoula
 Butler, James F.—West Seneca, N.Y.
 Lueck, Joy K.—Missoula
 Gaither, Shirley S.—Great Falls
 Roemer, Patricia L.—Missoula

Instrument

Mahowald, Michael A.—Minneapolis
 Case, Gaylord J.—Billings
 Finch, Robert A.—Winnipeg, Man.
 Drentlaw, David A.—Northfield,
 Minn.
 Gaither, Shirley S.—Great Falls
 Yoder, Robert L.—Omaha, Neb.

Multi Engine

Rauscher, Worthie M.—Helena
 Larsen, Larry S.—Billings
 Stevens, John R.—Billings
 Wendland, Kenneth N.—Billings

A T R

Packham, Norman F.—Alberta,
 Canada

Flight Instructor

Killworth, Michael N.—Miles City
 Darst, Charles D.—Clarkston, Wash.

Flight Instructor Instrument

Cook, Robert W.—Lewistown
 Bartlett, George E.—Billings

Ground Instructor and Ground

Instructor Instrument

Deichel, Andrew J.—Billings
 Blair, George T.—Bozeman
 Bartlett, George E.—Billings
 Neff, Taylor S.—Lewistown
 Darst, Charles D.—Clarkston, Wash.
 Mahowald, Michael A.—Minneapolis
Senior Parachute Rigger
 Papritz, Rawhide C.—Everett, Wash.
 Moncrief, Ralph T.—Wolf Point
 Snapp, James D.—Pleasant Hope,
 Mo.

Rotocraft/Helicopter

Commercial and Instrument

Yaeger, William J.—Lewistown

Vasquez, Louis R.—Great Falls

Type Ratings

B-26

Lynch, John D.—Billings

W. F. GILSON NAMED FSS BILLINGS CHIEF

William F. Gilson was recently appointed Chief of the Federal Aviation Agency's Flight Service Station in Billings.



W. F. Gilson, Billings, FSS Chief

Mr. Gilson, a native of Minneapolis, Minnesota, served four years in the United States Navy during World War II. Following his discharge from the Navy, he joined the CAA/FAA and during the past 20 years has had assignments in the following states: Alaska, Washington, Kentucky, Illinois, South Dakota, Minnesota, Idaho, North Dakota and Montana. Immediately prior to his Billings promotion, Bill was Station Chief at Dickenson, North Dakota.

Bill lists his favorite hobbies as climbing, tennis and classic guitar. The Gilsons have 3 sons in junior high, senior high and college grades.

FOR SALE: Bonanza J-35—Excellent condition—35 hr. SMOH—including brand new crank shaft, cam shaft, intake/exhaust valves, muffler, prop and governor overhaul. Many extras—like new upholstery—MK II omniator, Narco Simplexer—ADF. Price: \$15,995. Contact: Mrs. Jack Lovelace, Bozeman. Phone: 586-5509.

FOR SALE: Cessna 140-A—1950—All metal taper wing, single lift strut, 785 S. M. O. H.—42 Hrs. S.T.O.H. New Windshield, tires, battery, S.W.—T. & B.—R & C. O.A.T.—S.A., VHT—2 with Filter, Flashing Nav. Lights, leading edge landing lights, Dual Brakes, Wheel Pants, Spinner, etc. Full paint in beautiful Red, Black and Ivory. Price: \$3,500. Contact: Paul D. Marvel, Box 82, Rexford, Mont. Phone: 386-8223.

FOR SALE: 1946 Navion—500 hrs. on new continental 225. Approx. 1200 Air Frame. To date—New Annual. Price: \$5,500. Contact: Don Cazier, Townsend, Montana, P. O. Box 697. Phone 266-3313.

CESSNA SURVEY REPORTS GROWTH OF AVIATION EDUCATION

An extensive market research survey just completed by Cessna indicates that aviation education is becoming increasingly widespread as a part of regular instruction at high schools and junior colleges around the country.

Efforts to expand aviation education programs are a major part of Cessna's current learn-to-fly activities.

Dr. Leslie L. Thomason, Cessna's director of market research and education, said, "Aviation education will orient students to our three-dimensional world and will help them solve the many problems in contemporary life generated by changing trends in airplanes, rockets, missiles, and space vehicles."

The study of education programs in all 50 states identified 61 high school and 23 junior college programs which offer at least ground school instruction for credit. In addition, a number of these offer some type of "flight experience" or are related to technical-vocational training, such as work toward an A and P mechanic's rating. Another 59 high school programs dealing with some phase of aviation education were also listed in the survey.

The most significant information turned up by the survey is that educators realize the need for aviation education and are seeking ways to expand and improve their programs, and will probably build upon the pattern of those courses which are proving the most successful.

A traffic officer stopped a tourist enroute to Montana and said, "I'm going to give you a ticket for driving without a tail light." The man got out to investigate, and set up a wail of dismay. "Come now, said the officer, it's not as serious as all that." The tourist explained, "It's not the tail light I'm worried about. What's become of my trailer?"

Asked the meaning of the word "Budget", one little boy replied, "It's a family quarrel."

FOR SALE: 1953 Cessna 190-240 Continental-3 Radios-960 TT-Absolute original-Very Clean-Always hangared. Price: \$6,900. Write: 844-9th Ave. Helena, Montana.

VREDENBURG DEDICATION OPENS PILOTS DELIGHT FACILITY



Scene at Crystal Lakes Country Club on Dedication Day.

On August 21 the official Dedication of the Vredenburg Airport in conjunction with the Grand Opening of the Crystal Lakes Country Club drew over 300 persons and approximately 25 aircraft. The modern club with its heated swimming pool and the 3,700 ft. airstrip is owned and operated by E. W. Vredenburg, his son Edmund and Mr. Fred King. Located 12 miles south of Eureka, the strip is in a beautiful mountain setting with ideal fishing, another excellent addition to Montana's recreational airport facilities.

Senator William Hafferman from Lincoln County; Mr. Charles A. Lynch, MAC Director; Jerry Shaw, president of the First National Bank of Eureka and "Red" DuPree of Billings, president of the Montana Pilots Association were speakers for the ceremonies. Mr. Harry Donaldson was master of ceremonies and Bill Montgomery did the commentary during the very fine exhibition of Sky Diving. All enjoyed the performance of the water ballet team from Libby presented in the club pool.

From owner Vredenburg regarding Dedication Day we got the following sentiments: "I could not have asked for a **better** day—a **better** crowd or a **better** dedication." Those attending felt that they could not have asked for a **better** spot!

Side-light: MPA President "Red" and family were the very first persons to check in at the brand new motel!!!

(Photo courtesy of Tobacco Valley News)

THE 99's THANK YOU

We would like to take this opportunity to publically thank the Montana Aeronautics Commission, the Operators, the Montana Pilot's Association members and all others who contributed their time, money and wonderful support to our Big Sky Race No. 3, and made it the success we feel that it was. As Jack Wilson so aptly put it, "it was sort of a refresher course", and we all thoroughly enjoyed it. Thanks to everyone who did so much for us.

Pearl Magill & Beverly Ledbetter
Co-chairmen
All Race Contestants & other 99's

FEDERAL AVIATION AGENCY ITINERARY LISTING



Airport	September
Bozeman (Gallatin Field)	-----
Culbertson	-----
Glasgow	14
Glendive	-----
Great Falls	8
(International)	-----
Missoula	22
Sidney	28

Note: Provisions have been made to give private pilot written examinations ON AN APPOINTMENT BASIS ONLY at the following FAA Flight Service Stations.

Bozeman	Lewistown
Butte	Livingston
Cut Bank	Miles City
Dillon	Missoula

MISSOULA YOUTH CORPS ENJOY AIRPORT VISIT

The following account of the tour of the Missoula Skyflight Operation and aviation lecture presented by Mr. Robert Lueck was forwarded to us by Mrs. Cheinisky, Secretary of the Neighborhood Youth Corps.

Robert Lueck, Manager of Missoula Skyflight, took the 18 enrollees of Missoula Neighborhood Youth Corps on a tour of his Piper facilities and described the job related opportunities in aviation.

He discussed the theory of flight and talked about the knowledge required in order to fly. He said that one has to understand weather, radio and instruments. Also, good health, with the ability to listen and follow instructions are necessary personal characteristics.

"Anyone can learn to fly, if they want to, and everyone should try once in order to have some appreciation of what aviation, as well as their environment, is all about." He said that, "it gives the individual a sense of unity as a whole new world is opened."

"You people are the right age to begin in the field as general aviation is growing in leaps and bounds and is about 90 per cent of travel—the airlines is a small percentage of air transportation." He said that, "many people are required on the ground for every pilot in the air and the fields are wide open for qualified people."

"I hope that field operators will develop a profound interest in such programs as the NYC—we expect our young people to be aware and obtain the proper knowledge and we have a responsibility to give them accurate information and help them find themselves, whenever they are interested. We should help the people who are directly connected with these programs, as the space age is presenting unusual and exciting challenges for all of us."

"Ila Long, Neighborhood Youth Corps Director, urged the enrollees to make an effort when forming their goals to include knowledge that will help them be acquainted with the world of tomorrow. The airplane is making the world of tomorrow smaller and plays a large role in everyday things such as language. She urged the corpsmen to plan ahead as opportunities are available if persons prepare for them. "Right now you can

take advantage of the Civil Air Patrol, and prepare for programs in the military."

She urged the students to look into such areas as sales, design, radio operators, traffic agents and clerks, mechanics, and general office employment. Many fields are open that are related. "Aerospace is not just limited to men, as women are also needed"—Mrs. Long asked them to not waste time at this critical stage of their lives and to begin to think about themselves in preparation for the world of aerospace.

A CASE IN POINT

By Charles A. Smith
Commission Attorney

"AIRCRAFT COLLISION-PILOT RESPONSIBILITY VS. CONTROL TOWER OPERATOR'S RESPONSIBILITY"

In a recent Federal Case, the United States was sued for its alleged negligence in the giving of improper signals from a Control Tower of a large metropolitan airport. It was this alleged negligence which, according to the plaintiffs, was the cause of a collision of airplanes over a metropolitan airport.

The airport over which the accident occurred is used by all types of aircraft for various purposes, but it is not generally used by commercial airlines operating on scheduled flights. There are three large runways on the field, of which only two require reference. Runway 17 runs in a north-south direction (178° south), and it is crossed by Runway 13 which runs in a northwest-southeast direction (130° south-east). Flight operations at the field were directed from a Control Tower operated by employees of the Federal Aviation Agency, an Agency of the United States. The collision occurred shortly after noon. The sun was shining and a moderate wind was blowing from the southeast. The two aircraft involved in the collision were a Cessna 170 and a Cessna 140. All four occupants of the aircraft were killed in the collision.

Shortly before the collision, the Cessna 140 took off on Runway 13, to the southeast and into the wind. This plane was engaged in making practice landings and was radio-equipped, but the radio was not in operation. No radio was required in the activity of the Cessna 140. The routine of such procedure was to

climb from the takeoff up to a 400-foot altitude, make a left turn to the crosswind leg, and climb to 600 feet, turn left again to a downwind course, parallel with Runway 13 for an appropriate distance, then make another left turn into the so-called base leg and from it, turn into the Runway approach for a landing.

The Cessna 170 was coming in from the north to make a simulated instrument landing on Runway 17. The pilot was a student taking instruction instrument flying. His side of the windshield was covered with a transparent amber shield and his eyes were covered with polaroid goggles, so that he could see the instrument panel and the plane, but could not see through the windshield. The visibility of his instructor was not, and was not permitted to be, restricted or impaired. As the Cessna 170 approached, the Cessna 140 had turned into its northwest, or downwind course, flying at 600 feet. The Cessna 170 requested the Control Tower to clear it for a simulated instrument landing. The clearance was given and with the clearance, a warning was given that there was "Traffic, Cessna 140, east of the field, downwind for Runway 13". A brief interval later, the Tower again warned the Cessna 170 of "Traffic, Cessna 140, downwind east of the field for Runway 13," and asked "Do you have him in sight?" The Cessna 170 replied "I have him in sight." As the Cessna 170 came over the "middle marker" radio facility, about six tenths of a mile from the end of the Runway 17, at an altitude of 400 feet, it transmitted "Missed approach," and began climbing. The Tower gave another warning, "Cessna crossing in front of you." The senior controller at the Tower heard an acknowledgement. As the Cessna 170 began its climb, it made a turn to the left and in a matter of seconds, the Cessna 170 came up to, and struck, the Cessna 140.

The Federal District Court found that each of the aircraft was on a proper course and altitude of the time of the collision, and that there was no negligence on the part of the operator of either aircraft. The District Court found that the Control Tower negligently failed to instruct the Cessna 170 to alter his course so as to avoid the collision, and likewise, negligently failed to give red light signals to the Cessna 140 directing it to give way to the Cessna 170.

It was also held that the tower operators' negligently failed to maintain proper control over the two aircraft so that each would be properly spaced. From this ruling, the United States appealed to the United States Court of Appeals.

The United States Court of Appeals overruled the Federal District Court. In so ruling, the Court found that the tower operators had no duty to give warning signals, and that the primary responsibility rests with the pilot. The Court said, "What we have said also disposes of the so-called finding that the tower operators negligently failed to maintain control over the two aircraft, so that each would be properly spaced so as to avoid collision." Here, again, the District Court has overlooked the principle that the direct and primary responsibility for the operation of aircraft over, or in the vicinity of an airport, rests upon the pilots of the aircraft. We are of the belief that in this respect also the District Court was in error."

It may be that there is a greater duty and responsibility on the Control Tower to aircraft operating under instrument flight rules than under visual flights rules, and in such a situation, a lesser responsibility rests upon the pilot. Although flying a simulated approach, the Cessna 170 was operating under visual flight rules. As had been said, ability of the instructor pilot to see was not impaired. Whatever may be the duty of the tower to a plane operating under instrument flight rules, we have no doubt but that the duty of the tower to the two aircraft involved in the collision and to those flying in them, was fully discharged."

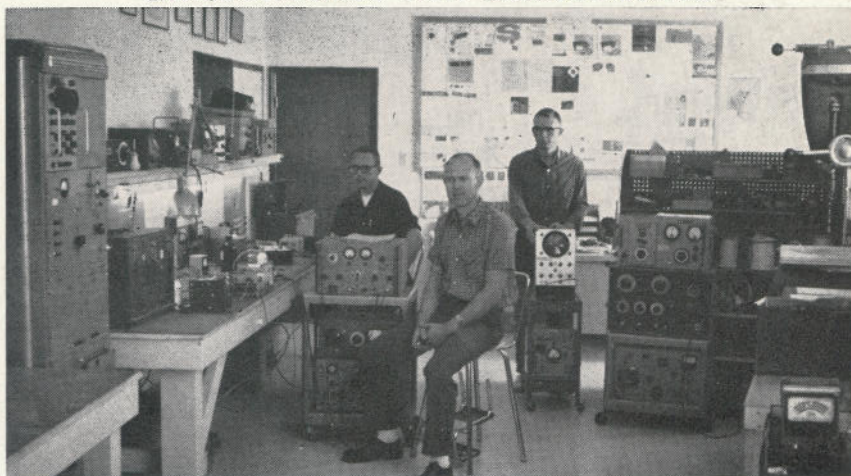
Thus the primary responsibility of avoiding collision or accidents rests with the pilot.

WEATHER BUREAU TELEPHONE NUMBERS FOR AVIATION SERVICE IN MONTANA

Billings	245-4884*
Glasgow (0300-2400)	228-8395
Great Falls	453-3512*
Havre (0430-1315)	265-6424
Helena	442-8260
Kalispell	756-4829
Missoula	543-7996*

NOTE: *Restricted Number. Use for Aviation Weather Information Only.

OPERATOR'S CORNER AEROTRONICS FOR ELECTRONICS



Aerotronics (Lt. to Rt. Allan J. Lundquist, Richard A. Van Luchene and Darrell Van Luchene.

Aerotronics, Certified Federal Aviation Agency Station, is located in the Combs-Pickens new facilities on Logan Field, Billings. Opened in the fall of 1965, Aerotronics is owned and operated by Allan J. Lundquist and Richard A. Van Luchene. They

have a full staff of technicians and are a full NARCO and KING warranty station. Aerotronics can handle all major lines of aircraft electronic equipment and have the facilities for testing of NAV/COMM and pulse equipment.

ATTENTION ALL REGISTERED MONTANA PILOTS!

**The Montana Pilots' Flight Plan
Service Is For You!**

**File/Close Your Flight Plan By
Collect Call — Free!**

When taking off from, or landing at, an airport within the State of Montana that does not have a FAA Flight Service Station—place a collect call to your nearest FSS and state, "This is a Collect Call—Montana Pilot Flight Plan."

GIVE THE FSS COMMUNICATOR Your Current Montana Registration Number and your name—then File or Close your Plan.

(Please avoid calling at 15 or 45 minutes after the hour during the weather broadcasts.)

REMEMBER—The Flight Plan Service is a "Use It or Lose It Service."

ALWAYS FILE A FLIGHT PLAN

— BE SURE TO CLOSE IT —

**USE YOUR MONTANA
FLIGHT PLAN SERVICE**

MONTANA AIRCRAFT OWNERS

It is necessary under the SARDA plan of the Civil Defense that the State Aeronautics Department maintain a roster of the FAA registered aircraft owners of civil aircraft within the State of Montana.

The registraion of aircraft in the State of Montana is being done on a voluntary, no-cost basis, by your State Aeronautics Commission. The forms are available from General Aviation Flight Operators and the Montana Aeronautics Commission.

**IF YOU OWN AN AIRCRAFT
— PLEASE, OBTAIN A FORM —
COMPLETE AND SEND IN
TODAY**

FOR SALE: Late 1958 Cessna 182—Sky-lane, 277 hrs on \$2,000 Chrome Major, 134 on factory overhaul prop. Full I.F.R.—equipped with 6 cylinder primers, 6 cylinder head temp. gauge—rotating beacon—5 month old NARCO radio Mark IV with OMNI and LFR/3. New heavy duty nose gear—new tires, brake block and disk. Interior and exterior excellent condition. Fresh license. Would take Luscombe sedan, 205 engine or Stinson, SW 165 on trade. Contact: John Bragg, Livingston. Phone: 222-0057 after 6:00, or 222-7990 before 5:00. Price \$8,850.

FLY SAFELY STARTING Safe

- S SELF.** Are you in shape? No booze, no drugs, no sleepless nights.
- A AIRCRAFT.** Are you totally familiar with the bird, it's performance, equipment, condition, servicing?
- F FLIGHT PLAN.** Has your planning included charts, weather, fuel needs, weight and balance, NOTAMS, a flight plan?
- E EXPERTESE.** Is your proficiency level equal to this flight, this aircraft, these conditions? How about recency of experience?

USE YOUR CHECKLISTS TAKEOFF Cigartip

- C CONTROLS.** Free and proper movement.
- I INSTRUMENTS.** Normal indications. Directional Gyro set to magnetic compass reading.
- G GAS.** Primer locked, mixture rich, fuel selector on proper tank, fuel gauges agree with known quantity.
- A ALTIMETER.** Set to altimeter setting or field elevation if no altimeter setting is available.
- R RUNUP.** Run up engine, and check mags, prop, and carburetor heat. Mags on "BOTH" after check.
- T TRIM.** Set trim tabs for takeoff.
- I INTERIOR.** Seats locked, seat belts fastened, windows and doors locked.
- P PROP.** Set prop control to High RPM.

LAND SAFELY LANDING Gump

- G GAS.** Fuel selector on proper tank for landing.
- U UNDERCARRIAGE.** Lower the landing gear and check it down—indicators, lights, and horns. Be sure it is down and locked!
- M MIXTURE.** Set on full rich, boost pumps turned on when applicable.
- P PROPELLER.** Set for landing RPM.

SAFETY TIPS ~~~~~ FEDERAL AVIATION AGENCY

MEMBER

NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

PURPOSE:—"To foster aviation as an industry, as a mode of transportation for persons and property and as an arm of the national defense; to join with the Federal Government and other groups in research, development, and advancement of aviation; to develop uniform laws and regulations; and to otherwise encourage co-operation and mutual aid among the several states."

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